

5 CLAIMS

10 1. A data storage and retrieval system characterized in that the fluorescent photosensitive glasses are used as information recording medium.

15 2. A data storage and retrieval system characterized in that the fluorescent photosensitive vitroceramics are used as information recording medium.

15 3. A data storage and retrieval system as in claims 1 and 2 characterized in that it comprises:

20 i) a confocal microscope 2;

ii) a tunable laser 5, having maximum 100fs light pulses, used in confocal microscope 2 for writing and reading by two-photon process;

25 iii) a vertical scanning system 3 and a radial scanning system 4 used for the movement of writing and excitation beams;

iv) a rotating optical memory 1;

v) an excitation laser 6, with the beam perpendicular on the fluorescence beam, provided with a vertical scanning system 7 for reading the optical memory by one-photon process.

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